

BUDGET COMMITTEE – NOVEMBER 16, 2004

GPS VEHICLE TRACKING SYSTEM

Recommendation

The Commissioner of Engineering and Public Works, Commissioner of Community Services and Commissioner of Legal and Administrative Services recommends;

That this report be received for information.

Purpose

Budget Committee at its meeting of February 10, 2003 requested a report on the benefits of installing GPS vehicle tracking systems in Parks and Public Works vehicles.

Background- Analysis and Options

The GPS vehicle tracking system was purchased to monitor the contracted and in-house snow clearing equipment. It was designed to provide management with precise information as to the location of the winter maintenance equipment, and allow staff the opportunity to co-ordinate the various snow clearing operations. As a bonus to the above noted management functions, a public web site was created that allowed the public to see the winter snow clearing operations in real time. This allowed residents the opportunity to see the ploughs in operation and “guesstimate” when they would receive snow clearing services. In addition to managing the operation more efficiently, the GPS tracking provides a permanent record of events for insurance claims. Public Works GPS initiative was the first in North America to stream plowing information to local residents via the internet and has been written up in various municipal trade magazines.

During the off-seasons, Public Works installed some of the units in the contracted sweeping units to better monitor the Spring street sweeping operation, as well as some other vehicles in order to track the contractors, as well as refine the functionality of the system. Public Works was requested by the Executive Director of Buildings, Facilities and Parks to install a few of the units in some Parks vehicles. This was completed, and the monitoring of these units was done through appropriate staff. Recently, a number of GPS units were temporarily installed in By-law vehicles, at the request of the Senior Manger of By-law, as a trial.

With the onset of winter, the GPS units loaned to the various departments were re-installed in the equipment for which it was originally intended, the winter maintenance equipment. They remained in these units for the duration of last winter (2003-2004).

As Committee is aware, the GPS system was operated by Public Works as a management tool for winter operations. Should Council desire that all Public Works, Parks and possibly other City department vehicles be equipped with GPS units, there are a number of things to consider.

The agreement with Grey Island Inc., the vendor of the GPS service, expired at the end of last winter. As there are a number of new companies that now provide GPS vehicle tracking and locating services specifically geared to winter operations, the Public Works Department was anticipating putting out a RFP for these services in the Spring of 2004. However, as part of the Budget Reduction Initiatives approved by Council in June, 2004, the GPS service was eliminated. The associated budget reduction was \$70,000. The elimination of the funding for this program has resulted in the public web site being shut down for the 2004-2005 winter season and management relying on staff in the field to locate and monitor snow clearing equipment.

If GPS technology is to be deployed in various City-owned vehicles, the supplier must be capable of fulfilling the needs of the various departments, or multiple suppliers would need to be used.

Once a supplier or suppliers are chosen, different agreements with the service provider(s) would need to be established in order to separate the information flow between the various units. Public Works has specific needs concerning tracking and record keeping, especially since the introduction of Regulation 239/02, which mandates specific road maintenance functions be completed within specific time frames. The previous GPS system allowed Roads management staff the opportunity to ensure that these standards were met. In addition, the management site and the public snow site were linked. By maintaining separate sites for the various other user departments, information exchange is faster, more confidential, and the screen is easier to read for those required to manage the operations. Confidentiality and access to the whereabouts of their various vehicles may be a significant concern for By-law Enforcement operations.

The following are the approximate number of vehicles involved in the current fleet if a City-wide GPS system was to be put in place:

Parks & Forestry Operations	45
Fleet	1
Water	11
Sewer	9
Waste	2
Engineering	10
Building	8
Building & Facilities	12
Legal	13
Clerks	6
IT	1
Recreation	1
 Total	 119

In addition to new service agreements and viewing sites, additional GPS units would need to be purchased, and user departments would need to budget for the monthly operating expenses. The GPS units Public Works were using cost approximately \$1,500 per unit. Operating expenses vary with the wireless data carrier, the amount of information transmitted, and the frequency of vehicle use. As such, the total capital and operating costs would not be known until a supplier had been chosen and the number of GPS units being utilized determined.

Based on the above numbers, the initial capital cost would be approximately \$178,500.

Notwithstanding the above concerns, the installation of GPS units in all City-owned vehicles may be beneficial to supervisory staff throughout the various departments in the City. It would provide an opportunity for supervisory staff to locate the nearest vehicle to respond to a particular concern, and would provide a documented record of such activity. As well, if there were any mechanical breakdown or medical emergencies, staff would be able to send out assistance within seconds of locating their exact location. It would also provide an accountability to offset public comments and inquiries, to protect the employee. Additionally, GPS units in vehicles may reduce lost time through better management of staff and resources. However, the initial costs would need to be included in the 2005 Capital and Operating Budgets by the various City departments in order to have a system up and running 2005. In addition, there may be a need to hold discussions with the local Union Officers to resolve any concerns regarding the tracking of staff.

Relationship to Vaughan Vision 2007

N/A

Conclusion

The GPS system that was used by Public Works is no longer operational due to budget cuts. Should Council determine that the installation of GPS units in all City vehicles to be worthwhile, the necessary funds would need to be included in the various departments' Operating and Capital Budgets, and a Request For Proposals would need to be developed in order to determine the best means of servicing the needs of the City's various user groups.

Attachments

No Attachments

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Respectfully submitted,

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